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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,264	09/18/2006	Christoph Klein	HM-685PCT	6744
40570	7590	07/09/2008		
FRIEDRICH KUEFFNER 317 MADISON AVENUE, SUITE 910 NEW YORK, NY 10017			EXAMINER	
			FOGARTY, CAITLIN ANNE	
			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			07/09/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/563,264

**Applicant(s)**

KLEIN ET AL.

**Examiner**

CAITLIN FOGARTY

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 1/3/2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1 – 7 are pending and presented for this examination.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) was submitted on January 3, 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

4. The drawings are objected to because the last line of p. 8 of the specification refers to the rolling mill WM in Fig. 1, however Fig. 1 contains WW instead of WM. Also, line 4 of p. 10 of the specification refers to the rolling mill WW in Fig. 2, however Fig. 2 contains two different elements labeled WL. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the

several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

5. Claim 1 is objected to because of the following informalities: The parentheses around "multi-stand rolling mill or Steckel mill(s)" should be removed in order to clarify whether the contents within the parentheses are a further claim limitation. Appropriate correction is required.
6. Claims 1 – 7 are objected to because of the following informalities: It is not clear whether "arrangement" is an apparatus claim or a product claim. It is suggested to change "arrangement" to "an installation". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frommann et al. (US 4,698,897) in view of Kondo et al. (US 6,024,808).

With respect to instant claim 1, col. 1 lines 42-48, col. 3 line 56-col. 4 line 62, Fig. 3, and Fig. 4 of Frommann disclose an arrangement for producing hot-rolled steel strip. The arrangement comprises at least one continuous casting machine, at least one shear (2), at least one soaking furnace (4, 6, 8), a descaler (13), possibly a roughing train (12), a finishing train (7) (multi-stand rolling mill or Steckel mill-see col. 3 lines 7-29), a roller table having a cooling zone, and at least one coiling reel (9) for the hot strip. The casting line and the pass line are arranged in parallel or approximately parallel to each other in such a way that the casting direction and the rolling direction are oriented essentially opposite each other and are connected with each other by a reheating furnace (4) (see Fig. 3).

Frommann differs from instant claim 1 because it does not specifically teach that the reheating furnace is a rocker-bar hearth furnace or a walking-beam furnace. However, col. 2 line 51 of Frommann teaches that the reheating furnace should be of the rotary variety. It would have been obvious to one of ordinary skill in the art that the

rotary furnace of Frommann would perform the same function of reheating the steel as the walking-beam furnace of the instant invention because it is well known in the art, as evidenced by col. 6 lines 26-29 of Kondo, that a rotary furnace and a walking beam furnace are functional equivalents in terms of reheating steel. See MPEP 2144.06.

In regards to instant claim 2, col. 2 lines 30-51 of Frommann disclose that the distance between the casting line and the pass line is designed so that sufficient residence and buffer time for the thin slabs in the reheating furnace is guaranteed.

Regarding instant claim 3, col. 3 lines 56-68 of Frommann teach that the reheating furnace can hold one or more coiled castings. This overlaps with the range recited in instant claim 3.

With respect to instant claim 4, col. 4 lines 46-62 and Fig. 4 of Frommann disclose that the casting line may consists of one or more casting machines or several casting strands.

In regards to instant claim 5, Frommann does not specifically teach that the casting and rolling plane are arranged at the same height. However, Figures 1 and 3 are drawn in such a way that the casting and rolling plane are arranged at the same height.

Regarding instant claim 6, col. 4 lines 33-45 and Fig. 4 of Frommann disclose that a hot inspection station (10) is arranged between the rolling mill and the reheating furnace. It would be expected that the hot inspection station of Frommann would act like a continuous furnace because the temperature of the steel is maintained while it is at the hot inspection station.

With respect to instant claim 7, col. 4 lines 1-10 and Fig. 3 of Frommann teach that at least one continuous furnace (6) is arranged between the rolling mill (7) and the reheating furnace (4).

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAITLIN FOGARTY whose telephone number is (571)270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

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